TITLE: **Method of Near-Unity Fractional Sampling Rate Alteration for High Fidelity Digital Audio**

ABSTRACT OF THE INVENTION

5   The present invention provides an efficient method for near-unity sampling rate alteration in high performance applications, such as CD to DAT conversion. Specifically, the input digital signal is first interpolated by a factor of eight and lowpass filtered to form an intermediate signal. A clamped cubic spline interpolator (CCSI) algorithm is then employed to accurately interpolate the intermediate signal to points in-between adjacent samples of the intermediate signal as required by the 48 kHz output sampling rate. The CCSI is highly accurate due to highly accurate derivative estimates arrived at by repeated Richardson extrapolation. In the example CD to DAT converter covered in detail, fourth order Richardson extrapolation is employed. It is shown by this example that the proposed method yields the desired performance, is computationally efficient and requires little storage.

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